

# Federal R&D Funding by Budget Function

Fiscal Years 1999-2001

An SRS Special Report

Division of Science Resources Studies  
Directorate for Social, Behavioral, and Economic Sciences

National Science Foundation



January 2001

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Ronald L. Meeks, Project Officer

Division of Science Resources Studies  
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# NOTES TO THE READER

This annual report contains information on Federal funding of the research and development (R&D) components of agency programs, as proposed by the administration for fiscal year (FY) 2001. R&D data in this report are classified into the same Federal budget function categories used in the *Budget of the United States Government, Fiscal Year 2001*, prepared by the Office of Management and Budget. Proposed FY 2001 funding levels are for budget authority (defined below), which is the basis for initial congressional action. In future *Budget Function* reports, these data will be revised to reflect congressional appropriation and actual program funding decisions. Detailed data are included on *preliminary* estimates for Federal funding of R&D in FY 2000 that reflect all past congressional actions, but may be revised, since at the time of report preparation, FY 2000 had not yet been completed. This report also includes detailed data (by subfunction) on actual budget authorizations of R&D by Federal agencies in FY 1999 and aggregate data (by broad function) on actual R&D budget authorizations in FY 1999 and earlier years.

## REPORT ORGANIZATION

These notes introduce basic budget terms and concepts used in this report. The rest of the report is divided into four sections:

***Research and Development in the 2001 Budget: A Brief Overview*** provides a brief overview of Federal Funding of R&D within the context of requested total Federal budget authority.

***Federal R&D Budget Authority by Budget Function*** consists of five tables. Tables 1, 2, and 5 provide an overview of Federal R&D funding in the context of requested total Federal budget authority. Table 3 contains data on Federal R&D funding for national defense and civilian programs in current and constant 1996 dollars for FYs 1955-2001. Table 4 contains data on budget authority for basic research by budget function for FYs 1999-2001.

***R&D by Specific Budget Function*** presents data on R&D activities conducted within each budget function. This section consists of 19 tables (tables 6 through 24) which provide a summary for FYs 1999-2001.

***Historical Tables*** presents two historical data series: (1) Federal R&D funding by budget function for FYs 1955-2001 (tables 25a through 25h) and (2) Federal funding of basic research for FYs 1978-2001 (tables 26a through 26d).

## DEFINITIONS

### *Research and Development*

As used in this report, R&D refers to research—both basic and applied—and development activities in the sciences and engineering.

**Research** is systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied according to the objective of the sponsoring agency.

- In **basic research**, the objective of the sponsoring agency is to gain fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.
- In **applied research**, the objective of the sponsoring agency is to gain knowledge or understanding necessary for determining means by which a recognized and specific need may be met.

**Development** is the systematic use of the knowledge or understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including design, development, and improvement of prototypes and new processes. It excludes quality control, routine product testing, and production.

Funds for conducting R&D include those for personnel, program supervision, and administrative support directly associated with R&D activities. Expendable or movable equipment needed to conduct R&D—e.g., microscopes or spectrometers—is also included.

This report does not include data on funds for R&D plant—i.e., funds for R&D facilities such as reactors,



wind tunnels, or particle accelerators or for the construction, repair, or alteration of such facilities. Also excluded are all non-R&D activities performed within budget functions that conduct R&D and all functions in which no R&D is conducted.

#### *Budget Authority, Obligations, and Outlays*

The Federal R&D funding data presented here are, with a few noted exceptions, provided in budget authority. Budget authority is used because it is the initial budget parameter for congressional action on the President's proposed budget. Budget authority imposes a ceiling on obligations and outlays; obligations and outlays flow from budget authority.

- **Budget authority** is the primary source of legal authorization to enter into obligations that will result in outlays. Budget authority is most commonly granted in the form of appropriations by the congressional committees assigned to determine the budget for each function.
- **Obligations** represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when the future payment of money is required.
- **Outlays** represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated or obligated.

## BUDGET FUNCTIONS

All activities covered by the Federal budget, including R&D, are classified into 20 broad functional categories. The Federal budget total comprises funding for these 20 functions. An agency's activities are not necessarily included in only one function. Instead, the programs of one agency typically are distributed across functions, and each function often includes programs from multiple agencies. No overlap occurs between functions or between the various agency programs within those functions. In a few cases, components of a major national effort are funded through multiple functions, such as the human genome mapping effort, which is funded under the health and general science categories.

Notably, each specific R&D activity is assigned to only one function area, consistent with the official codes used in budget documents, even though the R&D activity may address several functional concerns. For example, except for those of the U.S. Army Corps of Engineers, all R&D activities sponsored by the Department of Defense (DoD) are classified as defense, even though some activities have secondary objectives such as space or health. Moreover, only R&D funded by the Department of Health and Human Services and the Department of Labor is classified in the health function category. Yet some R&D funding, from at least three additional agencies—DoD and the Departments of Energy and Veterans Affairs—has a major health component.

The functional categories and definitions used in this report are the same as those used in the Federal budget, with one exception. R&D activities categorized as general science, space, and technology (function 250) are reported separately here. Subfunction 251 contains R&D activities for general science and basic research, and subfunction 252 contains R&D activities for space research and technology. Not all federally sponsored basic research is categorized in function 251, however; some basic research is included in 10 of the remaining 19 functional categories.

Five Federal budget functions—Medicare (function 570), social security (function 650), net interest (function 900), allowances (function 920), and undistributed offsetting receipts (function 950)—have no R&D components. Consequently, they are not discussed in this report, except where R&D is described as a proportion of total Federal budget authority.

The agency/function crosswalk on the following page lists—by name and function code—the 16 individual R&D functions/subfunctions (which are described in this report) funded by agencies.

## DATA SOURCES

Within the overall Federal budget there is no separately identified R&D budget as such; nor are most appropriations for R&D so labeled except in the case of certain program areas such as defense, energy, health, and environment. Consequently, most funds for R&D are not line items in an agency's budget submission but are included within general program funding.

AGENCY/FUNCTION CROSSWALK														
AGENCIES	FUNCTIONS													
	National Defense (050)	Health (556)	Space Research and Technology (252)	General Science and Basic Research (251)	Energy (270)	Transportation (400)	Natural Resources and Environment (300)	Agriculture (350)	Education, Training, Employment, and Social Services (500)	Veterans Benefits and Services (700)	International Affairs (150)	Commerce and Housing Credit (370)	Community and Regional Development (450)	Administration of Justice (750)
Agency for International Development											●			
Army Corps of Engineers (Civil)							●							
Dept. of Agriculture							●	●						
Dept. of Commerce							●					●	●	
Dept. of Defense (Military)	●													
Dept. of Education									●					
Dept. of Energy	●			●	●									
Dept. of Health and Human Services		●							●					
Dept. of Housing and Urban Development													●	
Dept. of Justice														●
Dept. of Labor		●							●					
Dept. of the Interior							●							
Dept. of State											●			
Dept. of the Treasury														●
Dept. of Transportation						●								
Dept. of Veterans Affairs										●				
Environmental Protection Agency							●							
National Aeronautics and Space Administration			●			●								
National Science Foundation				●										
Nuclear Regulatory Commission					●									
Smithsonian Institution									●					
Social Security Administration														●
Tennessee Valley Authority					●									

**KEY:** ● = R&D function funded by specified agency

**SOURCE:** Agencies' submission to Office of Management and Budget, Circular No. A-11, MAX Schedule C, "Research and Development Activities"; agency budget justification documents; and supplemental data from the agencies' budget offices.

To determine funding for Federal R&D, the Office of Management and Budget (OMB) requires agencies with annual R&D funding greater than \$10 million to submit data on their R&D programs as part of their annual budget submissions. Specifically, the agencies provide data—reported, in accordance with OMB Circular A-11, MAX Schedule C, “Research and Development Activities”—on funding levels for basic research, applied research, development, R&D plant, and R&D support to universities and colleges. This report does not include data on funds for R&D plant, as previously noted.

Data in this report represent agencies’ best estimates of actual and proposed Federal funding for R&D collected during the period between February and April

2000. These data are based primarily on information provided to OMB by 23 agencies and account for an estimated 99 percent of all federally sponsored R&D activities. Also incorporated in this report is R&D information that became available from the individual agencies after the administration’s budget was prepared and reported in the *Budget of the United States Government*. Such information consists of agency budget justification documents submitted to Congress and supplemental, program-specific information obtained from agency budget and program staff through mid-March 2000. Therefore, budget numbers for individual activities, programs, or agencies may differ slightly from those published in the President’s budget or agency budget documents.

# RESEARCH AND DEVELOPMENT IN THE 2001 BUDGET: A BRIEF OVERVIEW

## INTRODUCTION

This report contains information on Federal proposed fiscal year (FY) 2001 budget authority for the research and development (R&D) components of agency programs. The data were submitted by Federal agencies to the Office of Management and Budget in early 2000. This report includes historical data not affected by current legislation and therefore can be used for tracking funding trends. The report also contains detailed data on Federal R&D authorizations not readily available from other sources. How actions by Congress and the Administration affect the outcome of R&D funding levels will become apparent in 2001-2002.

## TOTAL R&D

In the first half of 2000, the administration proposed a total budget authority of \$82.7 billion for all Federal R&D programs in its FY 2001 budget, 2.5 percent more than the preliminary FY 2000 R&D total of \$80.7 billion. After adjusting for expected inflation, R&D budget authority would increase 0.5 percent. Budget authority for R&D grew 4.0 percent between FYs 1999 and 2000 (an increase of 2.5 percent in constant dollars).

The five largest budget functions with respect to absolute R&D funding—national defense; health; space research and technology; general science; and natural resources and environment—together account for 92.4 percent of all proposed Federal R&D funding.

Among individual functions, the largest FY 2001 R&D decrease (\$432 million) is proposed for defense (budget function code 050), which includes military programs of the Department of Defense (DoD) and the atomic energy defense activities of the Department of Energy (DOE). A 1.0-percent decrease in national defense R&D budget authority (in current dollars) is proposed. With this reduction, national defense would account for half (\$41.4 billion) of the Federal R&D total. The defense share of Federal R&D budget authority has decreased from 62.6 percent in FY 1990 to a proposed 50.1 percent in FY 2001. DoD's FY 2001 military research, development, test, and evaluation

(RDT&E) budget would account for 91.4 percent (\$37.9 billion) of the national defense R&D. R&D funding for DOE's atomic energy defense activities would account for 7.5 percent (\$3.1 billion) of the proposed FY 2001 national defense R&D.

The nondefense share of Federal R&D budget authority has increased steadily, rising from 37.4 percent of total in FY 1990 to a proposed 49.9 percent in FY 2001. In the period from FYs 1990-2001, the nondefense dollars have increased \$17.5 billion (\$10.6 billion in constant dollars), with an annualized rate of growth of 5.1 percent (3.0 percent in constant terms). The President's budget contains a \$2.4-billion increase in total nondefense R&D budget authority, to \$41.3 billion. This level represents a 6.2-percent increase over preliminary FY 2000 funding.

Among individual budget functions, health (budget function code 550) would receive the largest FY 2001 R&D budget increase, \$1.1 billion above the FY 2000 level and constituting 22.8 percent (\$18.9 billion) of the Federal R&D budget authority. The bulk of the health account (\$17.9 billion) would be for National Institutes of Health (NIH) programs. The R&D budgets of all 18 NIH institutes would increase, and total R&D funding for health activities at NIH is expected to increase by \$1.0 billion, or 6.0 percent, in FY 2001. The National Cancer Institute would receive the largest portion (\$3.4 billion) of NIH R&D dollars; followed by the National Heart, Lung, and Blood Institute, which would receive \$2.1 billion. Four other institutes—the National Institute of Allergy and Infectious Diseases; the National Institute of General Medical Sciences; the National Institute of Diabetes and Digestive and Kidney Diseases; and the National Institute of Neurological Disorders and Stroke—are each expected to receive more than \$1 billion.

The Administration proposed a 3.4-percent increase (up \$285 million to \$8.7 billion) in R&D budget authority for space research and technology activities (budget function code 252), which includes space programs of the National Aeronautics and Space Administration (NASA). The largest share of NASA's R&D activities comprise space science (31.0 percent of NASA's

proposed R&D activities); the space station (28.2 percent); and earth science (18.2 percent). In all, space research and technology accounts for 10.6 percent of the total proposed Federal R&D budget authority.

The Administration has proposed that research funding for general science (budget function code 251) increase 13.2 percent, or more than \$600 million in FY 2001, to a total of \$5.5 billion. This budget function category includes general science and basic research programs of the National Science Foundation (NSF) and DOE. NSF would account for 57.5 percent of these dollars, and DOE contributing the rest of the general science funding. NSF supports research in mathematical and physical sciences; geosciences; biological sciences; engineering; computer and information sciences; and social, behavioral, and economic sciences. DOE's major funded activities for general science R&D (each more than \$300 million) include support for high energy physics; nuclear physics; basic energy sciences; and biological and environmental research. Under the proposed budget, general science accounts for 6.7 percent of the total Federal R&D budget authority in FY 2001.

The Administration's request for national resources and environment R&D (budget function code 300) is \$1.9 billion for FY 2001, up 1.4 percent from the FY 2000 level (but a 0.6-percent decrease in constant dollars). Five agencies provide support for R&D activities in natural resources and environment: the Department of the Interior (DOI), which would account for 30.2 percent of the funding in this area; the Department of Commerce (28.8 percent); the Environmental Protection Agency (EPA) (27.5 percent); the Department of Agriculture (USDA) (11.9 percent); and DoD's Army Corps of Engineers (1.7 percent). Natural resources and environment R&D would account for 2.3 percent of the total Federal R&D budget authority.

Of the remaining 11 budget functions with R&D funding, transportation (R&D budget at \$1.7 billion), agriculture (\$1.5 billion), and energy (\$1.2 billion) each account for between 1 to 2 percent of proposed Federal funding of R&D for FY 2001. The remaining eight functions each account for less than 1 percent of the total FY 2001 proposed R&D budget authority.

FEDERAL R&D BUDGET AUTHORITY  
BY BUDGET FUNCTION

**Table 1. Federal R&D budget authority, by budget function: fiscal years 1999-2001**

2001 rank	Budget function	1999 actual	2000 preliminary	2001 proposed	Percent change	
		[In millions of dollars]			1999-2000	2000-2001
	Total.....	77,637	80,733	82,730	4.0	2.5
1	National defense.....	41,306	41,846	41,414	1.3	-1.0
2	Health.....	15,553	17,762	18,858	14.2	6.2
3	Space research and technology.....	8,245	8,447	8,732	2.5	3.4
4	General science and basic research.....	4,690	4,885	5,529	4.2	13.2
5	Natural resources and environment.....	1,842	1,906	1,932	3.5	1.4
6	Transportation.....	1,725	1,570	1,665	-9.0	6.0
7	Agriculture.....	1,288	1,405	1,450	9.1	3.2
8	Energy.....	1,131	1,112	1,184	-1.7	6.4
9	Veterans benefits and services.....	644	655	655	1.7	0.0
10	Commerce and housing credit.....	432	373	516	-13.6	38.4
11	Education, training, employment, and social services.....	403	476	497	18.1	4.4
12	International affairs.....	190	142	114	-25.3	-19.7
13	Administration of justice.....	88	77	74	-12.5	-3.9
14	Community and regional development.....	59	46	63	-22.0	37.0
15	Income security.....	38	25	42	-34.2	68.0
16	General government.....	3	6	6	100.0	0.0

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 2. Distribution of total Federal R&D budget authority,  
by function: fiscal years 1999-2001**  
(In percentages)

2001 rank	Budget function	1999 actual	2000 preliminary	2001 proposed
	Total.....	100.0	100.0	100.0
1	National defense.....	53.2	51.8	50.1
2	Health.....	20.0	22.0	22.8
3	Space research and technology.....	10.6	10.5	10.6
4	General science.....	6.0	6.1	6.7
5	Natural resources and environment.....	2.4	2.4	2.3
6	Transportation.....	2.2	1.9	2.0
7	Agriculture.....	1.7	1.7	1.8
8	Energy.....	1.5	1.4	1.4
9	Veterans benefits and services.....	0.8	0.8	0.8
10	Commerce and housing credit.....	0.6	0.5	0.6
11	Education, training, employment, and social services.....	0.5	0.6	0.6
12	International affairs.....	0.2	0.2	0.1
13	Administration of justice.....	0.1	0.1	0.1
14	Community and regional developme.....	0.1	0.1	0.1
15	Income security.....	*	*	0.1
16	General government.....	*	*	*

\* = Less than one-tenth of one percent.

**NOTE:** Because of rounding, components may not add to totals.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; age documents; and supplemental data obtained from agencies' budget offices.



**Table 3. Federally funded R&D for national defense and civilian functions:  
fiscal years 1955-2001**

Page 1 of 2

Fiscal	Current dollars			Constant 1996 dollars <sup>1</sup>			Percent of total	
	Total	National defense	Civilian functions	Total	National defense	Civilian functions	National defense	Civilian functions
	(In millions of dollars)							
1955.....	2,533	2,151	382	12,780	10,853	1,927	84.9	15.1
1956.....	2,988	2,535	453	14,676	12,451	2,225	84.8	15.2
1957.....	3,932	3,327	605	18,609	15,745	2,863	84.6	15.4
1958.....	4,570	3,801	769	21,089	17,540	3,549	83.2	16.8
1959.....	6,694	5,556	1,138	30,303	25,152	5,152	83.0	17.0
1960.....	7,552	6,107	1,445	33,865	27,386	6,480	80.9	19.1
1961.....	9,059	7,005	2,054	40,084	30,996	9,088	77.3	22.7
1962.....	10,290	7,238	3,052	44,974	31,635	13,339	70.3	29.7
1963.....	12,495	7,764	4,731	53,974	33,538	20,436	62.1	37.9
1964.....	14,225	7,829	6,396	60,661	33,386	27,275	55.0	45.0
1965.....	14,614	7,342	7,272	61,275	30,784	30,491	50.2	49.8
1966.....	15,320	7,536	7,784	62,864	30,923	31,941	49.2	50.8
1967.....	16,529	8,566	7,963	65,722	34,060	31,662	51.8	48.2
1968.....	15,921	8,275	7,646	61,047	31,729	29,317	52.0	48.0
1969.....	15,641	8,356	7,285	57,419	30,675	26,744	53.4	46.6
1970.....	15,339	7,981	7,358	53,446	27,808	25,638	52.0	48.0
1971.....	15,543	8,110	7,433	51,484	26,863	24,621	52.2	47.8
1972.....	16,496	8,902	7,594	52,120	28,126	23,994	54.0	46.0
1973.....	16,800	9,002	7,798	50,755	27,196	23,559	53.6	46.4
1974.....	17,410	9,016	8,394	49,111	25,433	23,678	51.8	48.2
1975.....	19,039	9,679	9,360	48,843	24,831	24,012	50.8	49.2
1976.....	20,780	10,430	10,350	49,725	24,958	24,767	50.2	49.8
1977.....	23,450	11,864	11,586	52,053	26,335	25,718	50.6	49.4
1978.....	25,976	12,899	13,077	53,993	26,811	27,181	49.7	50.3
1979.....	28,208	13,791	14,417	54,393	26,593	27,800	48.9	51.1
1980.....	29,739	14,946	14,793	52,804	26,538	26,266	50.3	49.7
1981.....	33,735	18,413	15,322	54,640	29,823	24,817	54.6	45.4
1982.....	36,115	22,070	14,045	54,753	33,460	21,293	61.1	38.9
1983.....	38,768	24,936	13,832	56,251	36,181	20,070	64.3	35.7
1984.....	44,214	29,287	14,927	61,838	40,961	20,877	66.2	33.8

See explanatory notes and SOURCES at end of table.

**Table 3. Federally funded R&D for national defense and civilian functions:  
fiscal years 1955-2001**

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Fiscal	Current dollars			Constant 1996 dollars <sup>1</sup>			Percent of total	
	Total	National defense	Civilian functions	Total	National defense	Civilian functions	National defense	Civilian functions
(In millions of dollars)								
1985.....	49,887	33,698	16,189	67,579	45,649	21,930	67.5	32.5
1986.....	53,249	36,926	16,323	70,454	48,857	21,597	69.3	30.7
1987.....	57,069	39,152	17,917	73,561	50,467	23,095	68.6	31.4
1988.....	59,106	40,099	19,007	73,809	50,074	23,735	67.8	32.2
1989.....	62,115	40,665	21,450	74,675	48,888	25,787	65.5	34.5
1990.....	63,781	39,925	23,856	73,872	46,242	27,630	62.6	37.4
1991.....	65,898	39,328	26,570	73,604	43,927	29,677	59.7	40.3
1992.....	68,398	40,083	28,315	74,670	43,759	30,912	58.6	41.4
1993.....	69,884	41,249	28,635	74,408	43,919	30,489	59.0	41.0
1994.....	68,331	37,764	30,566	71,119	39,305	31,814	55.3	44.7
1995.....	68,791	37,204	31,587	70,116	37,920	32,196	54.1	45.9
1996.....	69,049	37,801	31,248	69,049	37,801	31,248	54.7	45.3
1997.....	71,653	39,591	32,062	70,456	38,930	31,526	55.3	44.7
1998.....	73,569	39,823	33,746	71,426	38,663	32,763	54.1	45.9
1999.....	77,637	41,306	36,332	74,408	39,588	34,820	53.2	46.8
2000.....	80,733	41,846	38,888	76,235	39,514	36,721	51.8	48.2
2001.....	82,730	41,414	41,317	76,588	38,339	38,249	50.1	49.9

<sup>1</sup>Calculated using fiscal year GDP implicit price deflators with 1996 as the base year.

**NOTES:** The national defense function includes Department of Defense's military activities and Department of Energy's atomic energy defense programs. Civilian functions include all other Federally funded R&D activities. Data for 1955-77 are obligations. Data for 1978-99 are actual budget authority. Data for 2000 are preliminary estimates of budget authority. Data for 2001 are budget authority proposed by the administration.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

**Table 4. Federal budget authority for basic research, by budget function: fiscal years 1999-2001**

2001 rank	Budget function	1999 actual	2000 preliminary	2001 proposed	Percent change	
		(In millions of dollars)			1999-2000	2000-2001
	Total.....	17,433	18,965	20,259	8.8	6.8
4	National defense.....	1,110	1,205	1,262	8.6	4.7
1	Health.....	8,634	9,834	10,399	13.9	5.7
3	Space research and technology.....	1,667	1,737	1,761	4.2	1.4
2	General science.....	4,464	4,648	5,272	4.1	13.4
8	Natural resources and environment.....	142	155	162	8.9	4.4
7	Transportation.....	358	255	202	-28.8	-20.8
5	Agriculture.....	602	659	702	9.5	6.5
11	Energy.....	36	37	46	2.7	26.2
6	Veterans benefits and services.....	263	268	268	1.9	0.0
10	Commerce and housing credit.....	41	41	53	0.4	31.1
9	Education, training, employment, and social services.....	99	106	112	7.1	5.7
--	International affairs.....	0	0	0	NA	NA
12	Administration of justice.....	18	21	19	16.7	-9.5
--	Community and regional development.....	0	0	0	NA	NA
--	Income security.....	0	0	0	NA	NA
--	General government.....	0	0	0	NA	NA

**KEY:** NA = Not applicable

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data. The order of budget functions is the same as order for Federal R&D budget authority, by budget function shown in Table 1.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 5. Federal R&D budget authority as a percentage of total budget authority by budget function: fiscal years 1999-2001**

2001 rank	Budget function	1999 actual	2000 preliminary	2001 proposed
	All functions conducting R&D.....	7.7	8.0	7.7
3	National defense.....	14.1	14.3	13.6
4	Health.....	10.9	11.2	11.1
2	Space research and technology.....	66.2	67.2	66.7
1	General science.....	73.3	72.9	71.6
5	Natural resources and environment.....	7.5	7.8	7.4
8	Transportation.....	3.3	2.9	2.8
6	Agriculture.....	5.3	4.4	6.4
16	Energy <sup>1</sup> .....	115.3	-60.8	-123.8
9	Veterans benefits and services.....	1.5	1.4	1.4
7	Commerce and housing credit.....	3.0	3.7	4.8
10	Education, training, employment, and social services.....	0.7	0.9	0.7
11	International affairs.....	0.5	0.7	0.5
13	Administration of justice.....	0.3	0.3	0.2
12	Community and regional development.....	0.5	0.4	0.5
15	Income security.....	*	*	*
14	General government.....	*	*	*

<sup>1</sup>R&D as percentage of total budget authority is greater than 100 percent or negative because gross budget authority has been reduced by offsetting receipts. In FYs 2000 and 2001, offsetting receipts exceed gross budget authority.

\* = Less than one-tenth of 1 percent.

**NOTE:** Total budget authority includes discretionary and mandatory budget authority, less offsets. The order of budget functions is the same as order for Federal R&D budget authority, by budget function shown in Table 1.

**SOURCES:** Agencies' submissions to Office of Management and Budget (OMB), MAX Schedule C; agency budget justification documents; supplemental data obtained from agencies' budget offices; and OMB, *Budget of the United States Government, Fiscal Year 2001*, (Washington, DC, 2000), table 32-1.

## R&D BY SPECIFIC BUDGET FUNCTION

**Table 6. Federal R&D budget authority for national defense (050): fiscal years 1999-2001**

Agency	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
[In millions of dollars]				
Total.....	41,306	41,846	41,414	-1.0
Department of Defense-military (051).....	38,607	39,034	38,320	-1.8
Research, development, test, and evaluation (RDT&E).....	38,290	38,357	37,863	-1.3
Department of the Army.....	5,054	5,200	5,260	1.2
Department of the Navy.....	8,977	9,001	8,477	-5.8
Department of the Air Force.....	13,807	14,487	13,686	-5.5
Defense agencies.....	10,146	9,373	10,238	9.2
Ballistic Missile Defense Organization.....	3,910	3,428	3,943	15.0
Defense Advanced Research Projects Agency.....	1,888	1,876	1,951	4.0
Other defense agencies.....	4,348	4,069	4,344	6.8
Developmental test and evaluation <sup>1</sup> .....	259	265	0	NA
Operational test and evaluation <sup>1</sup> .....	47	31	202	NA
Other military funding <sup>2</sup> .....	317	677	457	-32.5
Department of Energy-atomic energy defense activities (053).....	2,699	2,812	3,094	10.0
Weapons activities <sup>3,4</sup> .....	1,697	1,790	2,037	13.8
Naval reactors development <sup>4</sup> .....	582	592	596	0.7
Environmental restoration and waste management.....	135	164	179	9.3
Intelligence.....	5	5	5	0.0
Nonproliferation <sup>4</sup> .....	195	173	180	4.0
Nuclear safeguards and security.....	21	27	25	-5.7
Fissile materials disposition <sup>4</sup> .....	63	61	71	17.2

<sup>1</sup>For the FY 2001 proposed budget, the Department of Defense (DoD) combined the developmental test and evaluation account with the operational test and evaluation account. The combined funding for these two accounts would decrease 31.8 percent, from \$296 million in FY 2000 to \$202 million in FY 2001.

<sup>2</sup>This item includes appropriate personnel costs in direct support of conduct of R&D, other appropriations funding certain DoD programs, and medical research funded outside RDT&E accounts.

<sup>3</sup>Includes funding from stockpile stewardship and stockpile management accounts.

<sup>4</sup>These accounts are now part of the National Nuclear Security Administration (NNSA) within the Department of Energy (DOE).

**KEY:** NA = Not applicable

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** DoD and DOE submissions to Office of Management and Budget (OMB), MAX Schedule C; DoD's "RDT&E Programs (R-1)"; OMB, *Budget of the United States Government, Fiscal Year 2001*, (Washington, DC, 2000), table 32-1.; and supplemental data obtained from the DOE budget office.

**Table 7. Total obligational authority for Department of Defense research, development, test, and evaluation (RDT&E) budget: fiscal years 1999-2001**

Page 1 of 2

Funding category and agency	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total RDT&E (budget authority).....	38,290	38,357	37,863	-1.3
Total RDT&E (TOA) <sup>1</sup> .....	38,104	38,289	37,862	-1.1
Basic research.....	1,064	1,161	1,217	4.9
Department of the Army.....	177	204	201	-1.7
Department of the Navy.....	354	374	397	6.2
Department of the Air Force.....	198	214	206	-3.6
Defense agencies.....	335	368	413	12.0
Applied research .....	3,057	3,410	3,144	-7.8
Department of the Army.....	613	791	602	-23.8
Department of the Navy.....	551	622	527	-15.3
Department of the Air Force.....	582	597	590	-1.1
Defense agencies.....	1,312	1,400	1,424	1.7
Advanced technology development.....	3,453	3,826	3,182	-16.8
Department of the Army.....	634	684	491	-28.3
Department of the Navy.....	570	754	539	-28.5
Department of the Air Force.....	430	577	495	-14.2
Defense agencies.....	1,819	1,811	1,657	-8.5
Demonstration and validation.....	7,364	6,524	6,810	4.4
Department of the Army.....	489	476	661	39.1
Department of the Navy.....	2,424	2,367	2,230	-5.8
Department of the Air Force.....	1,200	926	888	-4.1
Defense agencies.....	3,250	2,756	3,030	10.0
Engineering and manufacturing development.....	7,646	8,679	8,661	-0.2
Department of the Army.....	1,247	1,503	1,770	17.8
Department of the Navy.....	2,154	2,302	2,152	-6.5
Department of the Air Force.....	3,596	4,073	3,554	-12.7
Defense agencies.....	649	801	1,185	47.9

See explanatory information and SOURCE at end of table.

**Table 7. Total obligational authority for Department of Defense research, development, test, and evaluation (RDT&E) budget: fiscal years 1999-2001**

Page 2 of 2

Funding category and agency	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Management support.....	3,553	2,552	2,434	-4.6
Department of the Army.....	1,263	739	697	-5.7
Department of the Navy.....	733	641	632	-1.5
Department of the Air Force.....	794	585	590	0.9
Defense agencies.....	458	291	314	7.8
Developmental test and evaluation <sup>2</sup> .....	259	265	0	NA
Operational test and evaluation <sup>2</sup> .....	47	31	202	NA
Operational systems development.....	11,967	12,137	12,415	2.3
Department of the Army.....	609	827	837	1.2
Department of the Navy.....	2,157	1,997	2,000	0.2
Department of the Air Force.....	6,931	7,315	7,362	0.6
Defense agencies.....	2,269	1,997	2,215	10.9
Adjustment for RDT&E budget authority <sup>1</sup> .....	186	68	1	-99.1

<sup>1</sup>Detailed budget information on DoD's RDT&E activities is available only in total obligational authority (TOA), which is the sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget authority from previous years and other authorized credits from TOA.

<sup>2</sup>For the FY 2001 proposed budget, the Department of Defense (DoD) combined the Developmental test and evaluation account with the operational test and evaluation account. The combined funding for these two accounts would decrease 31.8 percent, from \$296 million in FY 2000 to \$202 million in FY 2001.

**KEY:** NA = Not applicable

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Data from DoD, "RDT&E Programs (R-1)." Total RDT&E budget authority data from *Budget of the United States Government, Fiscal Year 2001*, (Washington, DC, 2000), appendix pp. 288-294.



**Table 8. Federal R&D budget authority for health (550): fiscal years 1999-2001**

Funding category and agency	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	15,553	17,762	18,858	6.2
Health care services and health research and training (551, 552).....	15,427	17,631	18,716	6.2
Department of Health and Human Services (DHHS):				
National Institutes of Health.....	14,765	16,860	17,869	6.0
Centers for Disease Control.....	433	477	518	8.6
Agency for Healthcare Research and Quality.....	141	168	209	24.4
Health Care Financing Administration.....	49	61	55	-9.8
Health Resources and Services Administration.....	14	15	15	0.0
Departmental Management .....	25	50	50	0.0
Consumer and occupational health and safety (550).....	126	131	142	8.4
Food and Drug Administration (DHHS).....	122	127	137	7.9
Occupational Safety and Health Administration (Department of Labor).....	4	4	5	25.0

<sup>1</sup>Formerly the Agency for Health Care Policy and Research.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget MAX Schedule C;  
and supplemental data obtained from the agencies' budget offices.

**Table 9. Federal R&D budget authority for the National Institutes of Health:  
fiscal years 1999-2001**

Agency	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total.....	14,765	16,860	17,869	6.0
National Cancer Institute.....	2,856	3,247	3,437	5.9
National Heart, Lung, and Blood Institute.....	1,725	1,963	2,068	5.3
National Institute of Allergy and Infectious Disease.....	1,530	1,739	1,867	7.3
National Institute of General Medical Sciences.....	1,067	1,208	1,277	5.7
National Institute of Diabetes and Digestive and Kidney Diseases.....	981	1,104	1,171	6.1
National Institute of Neurological Disorders and Stroke.....	878	1,006	1,060	5.4
National Institute of Mental Health.....	814	922	979	6.2
National Institute of Child Health and Human Development.....	723	831	877	5.5
National Institute on Drug Abuse.....	596	670	709	5.9
National Institute on Aging.....	578	668	708	5.9
National Center for Research Resources.....	529	600	638	6.3
National Eye Institute.....	385	439	462	5.3
National Institute of Environmental Health Sciences.....	360	426	452	6.1
National Institute of Arthritis and Musculoskeletal and Skin Diseases.....	298	339	358	5.5
National Institute on Alcohol Abuse and Alcoholism.....	252	284	300	5.5
National Institute of Dental and Craniofacial Research.....	225	258	272	5.5
National Institute on Deafness and Other Communication Disorders.....	221	255	269	5.6
National Human Genome Research Institute.....	275	331	354	6.7
National Library of Medicine.....	85	109	118	7.8
National Institute of Nursing Research.....	64	82	85	3.2
John E. Fogarty International Center.....	35	43	48	10.4
Office of AIDS Research <sup>1</sup> .....	0	0	0	0.0
Office of the Director.....	240	265	290	9.6
National Center for Complementary and Alternative Medicine.....	50	67	71	5.9

<sup>1</sup>The Office of AIDS Research (OAR) was created in FY 1995 to consolidate NIH-wide AIDS research. OAR funds AIDS research in other institutes. AIDS research is funded in individual institutes for FY 1999 and FY 2000. The FY 2001 request consolidates AIDS research in the OAR account, but the table distributes the funds to the institutes for comparison purposes. Total AIDS R&D is \$1,793 million in FY 1999, \$2,006 million in FY 2000, and \$2,111 million in FY 2001.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.  
Excludes non-R&D and R&D facilities components of institute budgets.

**SOURCES:** Departmental submission to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from NIH budget office.

**Table 10. Federal R&D budget authority for space research and technology (252):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	8,245	8,447	8,732	3.4
National Aeronautics and Space Administration:				
Space Station.....	2,605	2,675	2,464	-7.9
Other human space flight.....	39	20	37	86.4
Space science.....	2,424	2,517	2,711	7.7
Life and microgravity sciences.....	336	357	401	12.1
Earth science <sup>1</sup> .....	1,569	1,623	1,585	-2.3
Advanced space transportation.....	553	510	669	31.1
Commercial technology.....	177	177	180	1.6
Academic programs.....	150	153	119	-22.1
Mission communication services .....	394	416	566	36.2

<sup>1</sup>Formerly Mission to Planet Earth.

**NOTES:** Includes funds for research and research program management, but excludes fixed capital equipment. Because of rounding, components may not add to totals. Percent change derived from unrounded data.

**SOURCES:** National Aeronautics and Space Administration's (NASA's) submissions to Office of Management and Budget Schedule C; budget justification documents; and supplemental data obtained from the NASA budget office.

**Table 11. Federal R&D budget authority for general science and basic research (251):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total.....	4,690	4,885	5,529	13.2
National Science Foundation.....	2,465	2,656	3,180	19.7
Mathematical and physical sciences.....	734	758	881	16.3
Geosciences.....	478	488	583	19.5
Biological sciences.....	392	414	511	23.3
Engineering .....	370	382	457	19.6
Computer and information science and engineering.....	299	388	529	36.2
U.S. polar research programs.....	183	190	223	17.0
Social, behavioral, and economic sciences...	142	146	175	19.8
Integrative activities <sup>1</sup> .....	162	129	119	-7.7
Education and human resources.....	91	121	110	-9.0
Budget authority adjustment <sup>2</sup> .....	-385	-361	-408	NA
Department of Energy.....	2,225	2,230	2,349	5.4
High energy physics.....	539	554	566	2.3
Nuclear physics.....	270	307	318	3.6
Fusion energy sciences.....	197	230	236	2.8
Basic energy sciences.....	598	601	651	8.4
Advanced scientific computing research <sup>3</sup> .....	143	122	171	40.8
Energy research analyses .....	1	1	1	0.9
Small business innovation research <sup>4</sup> .....	81	0	0	NA
Biological and environmental research.....	395	417	406	-2.5
Human genome.....	91	89	90	1.6
All other research.....	305	328	316	-3.6

<sup>1</sup>New account beginning in FY 1999 to support cross-disciplinary research and instrumentation.

<sup>2</sup>Budget authority adjustment subtracts costs for research facilities, major equipment support, and other non-R&D from total National Science Foundation R&D. Adjustment also subtracts research facilities and major equipment support costs, and other non-R&D costs.

<sup>3</sup>Renamed from Computational and Technology Research.

<sup>4</sup>Department of Energy treats this activity as a budget execution program (i.e., funds are collected from existing appropriations and are not allocated until three quarters through the fiscal year.)

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 12. Federal R&D budget authority for natural resources and environment (300):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total.....	1,842	1,906	1,932	1.4
Pollution control and abatement (304)				
Environmental Protection Agency.....	553	537	531	-1.2
Science and technology.....	511	497	493	-0.7
Superfund.....	40	38	36	-5.5
Leaking underground storage tanks.....	1	1	1	16.7
Oil spill response research.....	1	1	1	11.1
Other accounts.....	1	1	0	-100.0
Conservation and land management (302)....	226	232	237	2.2
Forest Service (USDA).....	198	203	229	12.8
Department of the Interior <sup>1</sup> .....	28	29	8	-72.4
Recreational resources (303).....	192	168	182	8.3
Geological Survey <sup>2</sup> (Interior).....	162	137	151	10.1
National Park Service (Interior).....	30	31	31	0.0
Water resources (301).....	48	48	38	-20.8
Army Corps of Engineers (DOD).....	40	43	32	-25.6
Bureau of Reclamation (Interior).....	8	5	6	20.0
Other natural resources (306).....	823	921	945	2.6
Geological Survey <sup>3</sup> (Interior).....	265	365	388	6.2
National Oceanic and Atmospheric Administration (Commerce).....	558	556	557	0.2

<sup>1</sup>Includes Bureau of Land Management, Office of Surface Mining and Reclamation, and Minerals Management Service

<sup>2</sup>Natural resources research formerly funded by the National Biological Service.

<sup>3</sup>National mapping, water resources, and geological research.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 13. Federal R&D budget authority for other natural resources (306):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	823	921	945	2.6
U.S. Geological Survey (Interior).....	265	365	388	6.2
Geologic and mineral resource surveys and mapping.....	29	23	38	65.7
Water resources investigations.....	239	211	218	3.1
National mapping, geography, and survey.	149	131	132	0.9
Adjustment <sup>1</sup> .....	-152	0	0	0.0
National Oceanic and Atmospheric Administration (Commerce).....	558	556	557	0.2

<sup>1</sup>The USGS account structure changed between FY 1999 and FY 2000. Adjustment eliminates double-counting in FY 1999 accounts.

**NOTE:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 14. Federal R&D budget authority for transportation (400): fiscal years 1999-2001**

Budget function	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	1,725	1,570	1,665	6.0
Air transportation (402).....	1,349	1,190	1,172	-1.5
National Aeronautics and Space Administration.....	1,133	977	902	-7.7
Aeronautical research and technology.....	1,133	977	902	-7.7
Federal Aviation Administration (DOT).....	216	213	271	26.8
Ground transportation (DOT) (401).....	342	349	452	29.4
Federal Highway Administration.....	253	257	314	22.3
National Highway Traffic Safety Administration.....	50	51	95	88.4
Federal Railroad Administration.....	22	25	28	14.7
Federal Transit Administration.....	17	17	14	-16.9
Water transportation (DOT) (403).....	18	20	22	11.6
U.S. Coast Guard.....	18	20	22	11.6
Other transportation (DOT) (407) <sup>2</sup> .....	16	10	18	76.7

<sup>1</sup>Includes funds for research and research program management.

<sup>2</sup>Includes Office of the Secretary and the Research and Special Programs Administration.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; and supplemental data obtained from agencies' budget offices.

**Table 15. Federal R&D budget authority for agriculture (350): fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total.....	1,288	1,405	1,450	3.2
Agricultural research and services (352):				
Department of Agriculture				
Agricultural Research Service.....	724	759	819	7.9
Research on plant sciences.....	277	276	280	1.4
Research on commodity conversion and delivery.....	147	161	171	6.7
Research on animal sciences.....	112	124	132	6.2
Research on soil, water, and air sciences.....	77	83	103	24.0
Research on human nutrition.....	63	68	84	24.0
Integration of agricultural systems.....	28	29	28	-2.0
Agricultural information and library service.....	20	19	21	11.5
Cooperative State Research, Education, and Extension Service.....	463	538	523	-2.8
National Research Initiative.....	119	119	150	26.1
Payments under the Hatch Act.....	181	181	181	0.0
Special research grants.....	60	64	9	-85.9
Initiative for Future Agriculture and Food Systems <sup>1</sup> .....	0	120	120	0.0
Other research programs.....	103	54	63	16.7
Economic Research Service.....	63	64	55	-14.1
Animal and Plant Health Inspection Service.....	20	21	21	0.0
National Agricultural Statistics Service.....	4	4	4	0.0
Agricultural Marketing Service.....	5	5	6	20.0
Federal Grain Inspection Service.....	3	3	6	100.0
Foreign Agricultural Service.....	1	1	1	0.0
Alternative Agricultural Research and Commercialization.....	4	0	0	NA
Office of the Secretary <sup>1</sup> .....	1	10	15	50.0

<sup>1</sup>Mandatory (non-appropriated) program. The FY 1999 Agriculture appropriations bill blocks the expenditure of these funds in FY 1999. The budget proposes to restore the FY 1999 funds in FY 2000, and to allow the expenditure of FY 2001 funds.

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** United States Department of Agriculture's (USDA's) submission to Office of Management and Budget, MAX Schedule C; budget justification documents; and supplemental data obtained from USDA budget office.



**Table 16. Federal R&D budget authority for energy (270): fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	1,131	1,112	1,184	6.4
Department of Energy.....	1,048	1,026	1,099	7.1
Fossil energy (271).....	252	179	136	-24.1
Clean coal technology <sup>1</sup> .....	-40	-146	-155	NA
Cooperative R&D.....	7	7	6	-21.0
Petroleum, coal, and gas program.....	286	318	285	-10.3
Energy supply (271) .....	353	361	459	27.0
Nuclear energy.....	72	90	91	0.6
Solar and renewables .....	282	271	368	35.8
Radioactive waste management (271).....	62	55	40	-28.0
Energy conservation (272).....	381	431	465	7.8
Tennessee Valley Authority (271).....	34	33	32	-3.0
Nuclear Regulatory Commission (276).....	49	53	53	0.0

<sup>1</sup>Negative for some years because of rescissions and deferrals of previously appropriated funds.  
Also reflects proposed FY 2001 deferrals.

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; Department of Energy's budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 17. Federal R&D budget authority for veterans benefits and services (700):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	644	655	655	0.0
Department of Veterans Affairs Medical and prosthetic research (703) .....	644	655	655	0.0

**NOTE:** Includes administrative and operating expenses related to agency's research.

**SOURCES:** Departmental submission to Office of Management and Budget, MAX Schedule C.

**Table 18. Federal R&D budget authority for commerce and housing credit (370):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
(In millions of dollars)				
Total.....	432	373	516	38.4
Other advancement of commerce (376)				
Department of Commerce				
National Institute of Standards and Technology.....	408	351	461	31.4
Electronics and electrical engineering.....	38	38	40	4.4
Manufacturing engineering.....	19	18	22	20.0
Chemical science and technology.....	32	32	33	3.7
Physics.....	27	27	36	34.2
Materials science.....	41	41	47	14.1
Building and fire research.....	14	14	13	-6.1
Computer science and applied math.....	42	42	49	14.8
Technology assistance.....	4	4	4	-1.0
Research support activities.....	17	19	25	33.1
Industrial technology services				
Advanced Technology Program.....	174	115	148	28.9
Institute for Information Infrastructure Protection....	0	0	44	NA
Bureau of the Census.....	2	2	2	0.0
National Telecommunications and Information Administration.....	22	20	53	165.0

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Departmental submission to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from agencies' budget offices.

**Table 19. Federal R&D budget authority for education, training, employment, and social services (500): fiscal years 1999-2001**

Budget function	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	403	476	497	4.4
Research and general education aids (501, 502, 503).....	209	239	277	15.9
Department of Education programs.....	114	137	169	23.4
Smithsonian Institution programs.....	95	102	108	5.9
Social services (506).....	129	170	183	7.6
Administration for Children and Families (DHHS).....	20	41	43	4.9
Administration on Aging (DHHS).....	18	33	38	15.2
Rehabilitation services (Education).....	91	96	102	6.3
Training and employment (504) (Labor's Employment and Training Admin.).....	65	67	37	-44.8

**NOTES:** Because of rounding, components may not add to totals. Percent change derived from unrounded data

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from agencies' budget offices.

**Table 20. Federal R&D budget authority for the Agency for International Development (AID) and other international programs (150): fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total (150).....	190	142	114	-19.7
Agency for International Development (150).....	167	122	98	-19.7
International Security Assistance (152).....	22	20	16	-20.0
Department of State (154).....	1	0	0	NA

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agency submission to Office of Management and Budget, MAX Schedule C; and supplemental data obtained from agency budget office.

**Table 21. Federal R&D budget authority for administration of justice (750):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	88	77	74	-3.9
Department of Justice.....	88	77	74	-3.9
Office of Justice programs (754).....	72	63	60	-4.8
Federal Bureau of Investigation (751).....	5	5	5	0.0
Federal Prison System (753).....	10	8	8	0.0
Immigration and Naturalization Service (751).....	1	1	1	0.0

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; and supplemental data obtained from agencies' budget offices.

**Table 22. Federal R&D budget authority for community and regional development (450): fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	59	46	63	37.0
Tennessee Valley Authority (452).....	0	0	0	NA
Department of Housing and Urban Development	58	45	62	37.8
Department of Commerce				
Economic Development Administration (452).....	1	1	1	0.0

**KEY:** NA = Not applicable.

**NOTES:** Because of rounding, components may not add to totals. Percent change is derived from unrounded data

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from agencies' budget offices.

**Table 23. Federal R&D budget authority for income security (600):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	(In millions of dollars)			
Total.....	38	25	42	68.0
Social Security Administration <sup>1</sup> .....	38	25	42	68.0

<sup>1</sup>Actual functional code is 650, Social Security.

**NOTE:** Percent change is derived from unrounded data.

**SOURCES:** Agency submissions to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from agency budget office.



**Table 24. Federal R&D budget authority for general government (800):  
fiscal years 1999-2001**

Funding category	1999 actual	2000 preliminary	2001 proposed	Percent change 2000-2001
	[In millions of dollars]			
Total.....	3	6	6	0.0
Department of the Treasury Engraving and Printing (803).....	3	6	6	0.0

**NOTE:** Percent change is derived from unrounded data.

**SOURCES:** Agency submissions to Office of Management and Budget, MAX Schedule C;  
and supplemental data obtained from agency budget office.

## HISTORICAL TABLES

**Table 25a. Federal R&D obligations, by selected budget function: fiscal years 1955-60**

Budget function	1955	1956	1957	1958	1959	1960
	(In millions of dollars)					
Total.....	2,533	2,988	3,932	4,570	6,694	7,522
National defense.....	2,151	2,535	3,327	3,801	5,556	6,107
Health.....	67	83	140	177	233	305
All other functions.....	315	370	465	592	904	1,140
	(In millions of constant FY 1996 dollars)					
Total.....	12,780	14,676	18,609	21,089	30,303	33,731
National defense.....	10,853	12,451	15,745	17,540	25,152	27,386
Health.....	338	408	663	817	1,055	1,368
All other functions.....	1,589	1,817	2,201	2,732	4,092	5,112

**NOTES:** Because of rounding, components may not add to totals.  
GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.

**Table 25b. Federal R&D obligations, by selected budget function: fiscal years 1961-66**

Budget function	1961	1962	1963	1964	1965	1966
(In millions of dollars)						
Total.....	9,059	10,290	12,495	14,225	14,614	15,320
National defense.....	7,005	7,238	7,764	7,829	7,342	7,536
Health.....	405	551	626	728	792	900
Space research and technology.....	777	1,413	2,812	4,241	4,887	4,976
Energy.....	373	448	515	571	585	575
General science.....	137	187	246	277	304	377
Natural resources and environment.....	73	108	120	134	159	189
Transportation.....	55	101	142	122	147	251
Agriculture.....	125	136	146	165	195	201
All other functions.....	108	107	125	160	203	315
(In millions of constant FY 1996 dollars)						
Total.....	45,531	44,974	53,974	60,661	61,275	62,864
National defense.....	32,027	31,635	33,538	33,386	30,784	30,923
Health.....	2,438	2,408	2,704	3,104	3,321	3,693
Space research and technology.....	6,252	6,176	12,147	18,085	20,491	20,419
Energy.....	1,982	1,958	2,225	2,435	2,453	2,359
General science.....	827	817	1,063	1,181	1,275	1,547
Natural resources and environment.....	478	472	518	571	667	776
Transportation.....	447	441	613	520	616	1,030
Agriculture.....	602	594	631	704	818	825
All other functions.....	473	468	540	682	851	1,293

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.

**Table 25c. Federal R&D obligations, by budget function: fiscal years 1967-72**

Budget function	1967	1968	1969	1970	1971	1972
(In millions of dollars)						
Total.....	16,529	15,921	15,641	15,339	15,543	16,496
National defense.....	8,566	8,275	8,356	7,981	8,110	8,902
Health.....	915	1,021	1,088	1,084	1,288	1,547
Space research and technology.....	4,778	4,304	3,799	3,606	3,048	2,932
Energy.....	600	657	597	574	556	574
General science.....	409	437	433	452	513	625
Natural resources and environment.....	320	331	323	340	416	479
Transportation.....	380	304	404	535	728	558
Agriculture.....	218	217	221	238	259	294
Education, training, employment, and social services.....	154	166	169	164	215	235
International affairs.....	18	17	26	32	32	29
Veterans benefits and services.....	41	45	50	59	63	69
Commerce and housing credit.....	43	48	54	79	90	50
Community and regional development.....	37	44	32	47	65	66
Administration of justice.....	*	1	5	9	10	23
Income security.....	48	50	78	136	145	106
General government.....	3	5	5	6	7	8
(In millions of constant FY 1996 dollars)						
Total.....	65,722	61,047	57,419	53,446	51,484	52,120
National defense.....	34,060	31,729	30,675	27,808	26,863	28,126
Health.....	3,638	3,915	3,994	3,777	4,266	4,888
Space research and technology.....	18,998	16,503	13,946	12,564	10,096	9,264
Energy.....	2,386	2,519	2,192	2,000	1,842	1,814
General science.....	1,626	1,676	1,590	1,575	1,699	1,975
Natural resources and environment.....	1,272	1,269	1,186	1,185	1,378	1,513
Transportation.....	1,511	1,166	1,483	1,864	2,411	1,763
Agriculture.....	867	832	811	829	858	929
Education, training, employment, and social services.....	612	637	620	571	712	742
International affairs.....	72	65	95	111	106	92
Veterans benefits and services.....	163	173	184	206	209	218
Commerce and housing credit.....	171	184	198	275	298	158
Community and regional development.....	147	169	117	164	215	209
Administration of justice.....	*	4	18	31	33	73
Income security.....	191	192	286	474	480	335
General government.....	12	19	18	21	23	25

\* = Less than \$500,000

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.

**Table 25d. Federal R&D obligations, by budget function: fiscal years 1973-77**

Budget function	1973	1974	1975	1976	1977
	(In millions of dollars)				
Total.....	16,800	17,410	19,039	20,780	23,450
National defense.....	9,002	9,016	9,679	10,430	11,864
Health.....	1,585	2,069	2,170	2,351	2,629
Space research and technology.....	2,824	2,702	2,764	3,130	2,832
Energy.....	630	759	1,363	1,649	2,562
General science.....	658	749	813	858	974
Natural resources and environment.....	554	516	624	683	753
Transportation.....	572	693	635	631	708
Agriculture.....	308	313	342	383	457
Education, training, employment, and social services.....	290	236	239	255	230
International affairs.....	28	24	29	42	66
Veterans benefits and services.....	74	85	95	98	107
Commerce and housing credit.....	50	51	65	69	71
Community and regional development.....	78	82	93	109	101
Administration of justice.....	33	35	44	35	30
Income security.....	106	71	72	48	55
General government.....	7	9	12	12	13
	(In millions of constant FY 1996 dollars)				
Total.....	50,755	49,111	48,843	49,725	52,053
National defense.....	27,196	25,433	24,831	24,958	26,335
Health.....	4,789	5,836	5,567	5,626	5,836
Space research and technology.....	8,532	7,622	7,091	7,490	6,286
Energy.....	1,903	2,141	3,497	3,946	5,687
General science.....	1,988	2,113	2,086	2,053	2,162
Natural resources and environment.....	1,674	1,456	1,601	1,634	1,671
Transportation.....	1,728	1,955	1,629	1,510	1,572
Agriculture.....	931	883	877	916	1,014
Education, training, employment, and social services.....	876	666	613	610	511
International affairs.....	85	68	74	101	147
Veterans benefits and services.....	224	240	244	235	238
Commerce and housing credit.....	151	144	167	165	158
Community and regional development.....	236	231	239	261	224
Administration of justice.....	100	99	113	84	67
Income security.....	320	200	185	115	122
General government.....	21	25	31	29	29

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.

**Table 25e. Federal R&D budget authority, by budget function: fiscal years 1978-83**

Budget function	1978	1979	1980	1981	1982	1983
(In millions of dollars)						
Total.....	25,976	28,208	29,739	33,735	36,115	38,768
National defense.....	12,899	13,791	14,946	18,413	22,070	24,936
Health.....	2,968	3,401	3,694	3,871	3,869	4,298
Space research and technology.....	2,939	3,136	2,738	3,111	2,584	2,134
Energy.....	3,134	3,461	3,603	3,501	3,012	2,578
General science.....	1,050	1,119	1,233	1,340	1,359	1,502
Natural resources and environment.....	904	1,010	999	1,061	965	952
Transportation.....	768	798	887	869	791	876
Agriculture.....	501	552	585	659	693	745
Education, training, employment, and social services.....	345	354	468	298	228	189
International affairs.....	57	117	125	160	165	177
Veterans benefits and services.....	111	123	126	143	139	157
Commerce and housing credit.....	77	93	101	106	104	107
Community and regional development.....	92	127	119	104	63	44
Administration of justice.....	44	47	45	34	31	37
Income security.....	67	57	47	43	32	32
General government.....	20	23	22	22	10	6
(In millions of constant FY 1996 dollars)						
Total.....	53,993	54,393	52,804	54,640	54,753	56,251
National defense.....	26,811	26,593	26,538	29,823	33,460	36,181
Health.....	6,169	6,558	6,559	6,270	5,866	6,236
Space research and technology.....	6,109	6,047	4,862	5,039	3,918	3,096
Energy.....	6,514	6,674	6,397	5,671	4,566	3,741
General science.....	2,182	2,158	2,189	2,170	2,060	2,179
Natural resources and environment.....	1,879	1,948	1,774	1,718	1,463	1,381
Transportation.....	1,596	1,539	1,575	1,408	1,199	1,271
Agriculture.....	1,041	1,064	1,039	1,067	1,051	1,081
Education, training, employment, and social services.....	717	683	831	483	346	274
International affairs.....	118	226	222	259	250	257
Veterans benefits and services.....	231	237	224	232	211	228
Commerce and housing credit.....	160	179	179	172	158	155
Community and regional development.....	191	245	211	168	96	64
Administration of justice.....	91	91	80	55	47	54
Income security.....	139	110	83	70	49	46
General government.....	42	44	39	36	15	9

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.

**Table 25f. Federal R&D budget authority, by budget function: fiscal years 1984-89**

Budget function	1984	1985	1986	1987	1988	1989
(In millions of dollars)						
Total.....	44,214	49,887	53,249	57,069	59,106	62,115
National defense.....	29,287	33,698	36,926	39,152	40,099	40,665
Health.....	4,779	5,418	5,565	6,556	7,076	7,773
Space research and technology.....	2,300	2,725	2,894	3,398	3,683	4,555
Energy.....	2,581	2,389	2,286	2,053	2,126	2,419
General science.....	1,676	1,862	1,873	2,042	2,160	2,373
Natural resources and environment.....	963	1,059	1,062	1,133	1,160	1,255
Transportation.....	1,040	1,030	917	908	896	1,064
Agriculture.....	762	836	815	822	882	907
Education, training, employment, and social services.....	200	220	248	267	285	347
International affairs.....	192	210	211	223	224	279
Veterans benefits and services.....	218	193	183	215	195	212
Commerce and housing credit.....	110	114	111	110	122	128
Community and regional development.....	46	50	88	99	108	74
Administration of justice.....	24	47	41	49	51	45
Income security.....	26	21	14	25	23	27
General government.....	8	17	14	17	17	15
(In millions of constant FY 1996 dollars)						
Total.....	61,838	67,579	70,454	73,561	73,809	74,675
National defense.....	40,961	45,649	48,857	47,205	50,074	48,888
Health.....	6,684	7,339	7,363	7,905	8,836	9,345
Space research and technology.....	3,217	3,691	3,829	4,097	4,599	5,476
Energy.....	3,610	3,236	3,025	2,475	2,655	2,908
General science.....	2,344	2,522	2,478	2,462	2,697	2,853
Natural resources and environment.....	1,347	1,435	1,405	1,366	1,449	1,509
Transportation.....	1,455	1,395	1,213	1,095	1,119	1,279
Agriculture.....	1,066	1,132	1,078	991	1,101	1,090
Education, training, employment, and social services.....	280	298	328	322	356	417
International affairs.....	269	284	279	269	280	335
Veterans benefits and services.....	305	261	242	259	244	255
Commerce and housing credit.....	154	154	147	133	152	154
Community and regional development.....	64	68	116	119	135	89
Administration of justice.....	34	64	54	59	64	54
Income security.....	36	28	19	30	29	32
General government.....	11	23	19	20	21	18

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCE:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; and supplemental data obtained from agencies' budget offices.



**Table 25g. Federal R&D budget authority, by budget function: fiscal years 1990-95**

Budget function	1990	1991	1992	1993	1994	1995
(In millions of dollars)						
Total.....	63,781	65,898	68,398	69,884	68,331	68,791
National defense.....	39,925	39,328	40,061	41,249	37,764	37,204
Health.....	8,308	9,226	10,055	10,280	10,993	11,407
Space research and technology.....	5,765	6,511	6,744	6,988	7,414	7,916
Energy.....	2,726	2,953	3,153	2,677	2,873	2,844
General science.....	2,410	2,635	2,659	2,691	2,712	2,794
Natural resources and environment.....	1,386	1,582	1,688	1,802	2,062	1,988
Transportation.....	1,045	1,231	1,523	1,703	1,888	1,833
Agriculture.....	950	1,052	1,155	1,152	1,193	1,194
Education, training, employment, and social services.....	374	433	365	348	373	369
International affairs.....	375	378	371	382	254	287
Veterans benefits and services.....	216	219	245	250	265	257
Commerce and housing credit.....	140	178	192	220	380	525
Community and regional development.....	67	88	95	57	68	70
Administration of justice.....	44	51	51	49	46	59
Income security.....	33	30	37	36	45	43
General government.....	17	4	4	*	0	1
(In millions of constant FY 1996 dollars)						
Total.....	73,872	73,604	74,670	74,408	71,119	70,116
National defense.....	46,242	43,927	43,734	43,919	39,305	37,920
Health.....	9,622	10,305	10,977	10,945	11,441	11,627
Space research and technology.....	6,677	7,272	7,362	7,440	7,717	8,069
Energy.....	3,157	3,298	3,443	2,850	2,990	2,899
General science.....	2,791	2,943	2,903	2,865	2,822	2,847
Natural resources and environment.....	1,605	1,767	1,843	1,918	2,146	2,027
Transportation.....	1,210	1,375	1,663	1,814	1,966	1,869
Agriculture.....	1,100	1,175	1,261	1,226	1,242	1,217
Education, training, employment, and social services.....	433	484	398	371	388	376
International affairs.....	434	422	405	407	265	293
Veterans benefits and services.....	250	245	267	267	276	262
Commerce and housing credit.....	162	199	210	234	396	535
Community and regional development.....	78	99	104	61	70	71
Administration of justice.....	51	57	55	52	48	60
Income security.....	38	33	40	39	47	44
General government.....	20	4	4	*	0	1

\* = Less than \$500,000.

**NOTES:** Because of rounding, components may not add to totals.  
GDP implicit price deflators used to convert current dollars to constant FY 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 25h. Federal R&D budget authority, by budget function: fiscal years 1996-2001**

Budget function	1996	1997	1998	1999	2000 preliminary	2001 proposed
(In millions of dollars)						
Total.....	69,049	71,653	73,569	77,637	80,733	82,730
National defense.....	37,801	39,591	39,823	41,306	41,846	41,414
Health.....	11,867	12,670	13,576	15,553	17,762	18,858
Space research and technology.....	7,844	7,844	8,198	8,245	8,447	8,732
Energy <sup>1</sup> .....	2,521	2,372	948	1,131	1,112	1,184
General science <sup>1</sup> .....	2,846	2,944	4,360	4,690	4,885	5,529
Natural resources and environment....	1,802	1,886	1,855	1,842	1,906	1,932
Transportation.....	1,795	1,785	1,833	1,725	1,570	1,665
Agriculture.....	1,176	1,203	1,249	1,288	1,405	1,450
Education, training, employment, and social services.....	331	373	444	403	476	497
International affairs.....	252	190	163	190	142	114
Veterans benefits and services.....	259	267	587	644	655	655
Commerce and housing credit.....	432	409	398	432	373	516
Community and regional development	50	48	42	59	46	63
Administration of justice.....	56	59	72	88	77	74
Income security.....	16	9	18	38	25	42
General government.....	2	2	2	3	6	6
(In millions of constant FY 1996 dollars)						
Total.....	69,049	70,456	71,426	74,408	76,235	76,588
National defense.....	37,801	38,930	38,663	39,588	39,514	38,339
Health.....	11,867	12,459	13,181	14,906	16,773	17,458
Space research and technology.....	7,844	7,713	7,959	7,902	7,977	8,083
Energy <sup>1</sup> .....	2,521	2,332	920	1,084	1,050	1,096
General science <sup>1</sup> .....	2,846	2,895	4,233	4,495	4,613	5,119
Natural resources and environment....	1,802	1,855	1,801	1,765	1,800	1,789
Transportation.....	1,795	1,756	1,780	1,653	1,482	1,541
Agriculture.....	1,176	1,183	1,213	1,234	1,327	1,342
Education, training, employment, and social services.....	331	367	431	386	449	460
International affairs.....	252	187	158	182	134	106
Veterans benefits and services.....	259	263	570	617	619	606
Commerce and housing credit.....	432	402	386	414	352	478
Community and regional development	50	47	41	57	43	58
Administration of justice.....	56	58	70	84	73	69
Income security.....	16	9	17	36	24	39
General government.....	2	2	2	3	6	6

<sup>1</sup>Beginning in FY 1998, a number of Department of Energy programs were reclassified from energy (270) to general science (251).

**NOTES:** Data for 1996-99 are actual budget authority. Data for 2000 are preliminary estimates, and data for 2001 are proposed based on fiscal year 2001 budget. Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 26a. Federal budget authority for basic research, by budget function: fiscal years 1978-83**

Budget function	1978	1979	1980	1981	1982	1983
(In millions of dollars)						
Total.....	3,665	4,108	4,716	5,107	5,305	6,247
Health.....	1,246	1,579	1,761	1,951	1,953	2,475
General science.....	962	1,026	1,152	1,256	1,296	1,439
Space research and technology.....	412	440	482	445	434	501
National defense.....	320	365	552	610	696	788
Energy.....	157	172	200	220	260	320
Agriculture.....	197	222	246	281	295	326
Natural resources and environment.....	207	131	136	131	139	156
Transportation.....	70	75	79	89	102	117
Education, training, employment, and social services.....	57	59	61	66	78	70
Commerce and housing credit.....	9	10	15	17	17	19
Veterans benefits and services.....	9	10	14	15	13	14
Administration of justice.....	10	10	9	5	4	4
Community and regional development.....	8	8	8	5	7	6
General government.....	0	*	*	3	2	3
International affairs.....	*	0	0	12	10	10
Income security.....	2	1	1	3	0	0
(In millions of constant FY 1996 dollars)						
Total.....	7,618	7,921	8,374	8,272	8,043	9,064
Health.....	2,590	3,045	3,127	3,160	2,961	3,591
General science.....	2,000	1,978	2,045	2,034	1,965	2,088
Space research and technology.....	856	848	856	721	658	727
National defense.....	665	704	980	988	1,055	1,143
Energy.....	326	332	355	356	394	464
Agriculture.....	409	428	437	455	447	473
Natural resources and environment.....	430	253	241	212	211	226
Transportation.....	145	145	140	144	155	170
Education, training, employment, and social services.....	118	114	108	107	118	102
Commerce and housing credit.....	19	19	27	28	26	28
Veterans benefits and services.....	19	19	25	24	20	20
Administration of justice.....	21	19	16	8	6	6
Community and regional development.....	17	15	14	8	11	9
General government.....	0	*	*	5	3	4
International affairs.....	*	0	0	19	15	15
Income security.....	4	2	2	5	0	0

\* = Less than \$500,000.

**NOTES:** Because of rounding, components may not add to totals. GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 26b. Federal budget authority for basic research, by budget function: fiscal years 1984-89**

Budget function	1984	1985	1986	1987	1988	1989
(In millions of dollars)						
Total.....	7,072	7,810	8,193	9,021	9,553	10,648
Health.....	2,813	3,243	3,324	3,851	4,087	4,413
General science.....	1,606	1,779	1,795	1,942	2,061	2,265
Space research and technology.....	646	498	737	843	944	1,099
National defense.....	845	856	960	900	905	965
Energy.....	365	428	456	511	571	703
Agriculture.....	353	406	390	397	428	433
Natural resources and environment.....	192	206	204	206	210	331
Transportation.....	125	255	184	231	197	287
Education, training, employment, and social services.....	77	86	83	78	83	92
Commerce and housing credit.....	20	23	26	26	28	29
Veterans benefits and services.....	15	15	15	17	17	16
Administration of justice.....	5	4	5	8	8	7
Community and regional development.....	5	6	6	4	7	3
General government.....	3	4	5	4	5	3
International affairs.....	3	4	5	3	3	3
Income security.....	0	0	0	0	0	0
(In millions of constant FY 1996 dollars)						
Total.....	9,891	10,580	10,840	11,628	11,929	12,501
Health.....	3,934	4,393	4,398	4,964	5,104	5,181
General science.....	2,246	2,410	2,375	2,503	2,574	2,659
Space research and technology.....	903	675	975	1,087	1,179	1,290
National defense.....	1,182	1,160	1,270	1,160	1,130	1,133
Energy.....	510	580	603	659	713	825
Agriculture.....	494	550	516	512	534	508
Natural resources and environment.....	269	279	270	266	262	389
Transportation.....	175	345	243	298	246	337
Education, training, employment, and social services.....	108	116	110	101	104	108
Commerce and housing credit.....	28	31	34	34	35	34
Veterans benefits and services.....	21	20	20	22	21	19
Administration of justice.....	7	5	7	10	10	8
Community and regional development.....	7	8	8	5	9	4
General government.....	4	5	7	5	6	4
International affairs.....	4	5	7	4	4	4
Income security.....	0	0	0	0	0	0

**NOTES:** Because of rounding, components may not add to totals.

GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, Circular No. A-11, Exhibit 44A, "Research and Development Activities"; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 26c. Federal budget authority for basic research, by budget function: fiscal years 1990-95**

Budget function	1990	1991	1992	1993	1994	1995
(In millions of dollars)						
Total.....	11,288	12,405	12,973	13,440	13,552	13,772
Health.....	4,661	5,021	5,506	5,700	5,889	6,068
General science.....	2,306	2,526	2,532	2,553	2,542	2,622
Space research and technology.....	1,389	1,479	1,499	1,588	1,796	1,614
National defense.....	964	1,188	1,147	1,323	1,174	1,181
Energy.....	761	878	921	917	921	930
Agriculture.....	456	486	528	553	567	565
Natural resources and environment.....	336	389	383	376	224	187
Transportation.....	242	246	266	238	220	389
Education, training, employment, and social services.....	106	115	118	121	145	153
Commerce and housing credit.....	31	39	35	34	38	35
Veterans benefits and services.....	16	16	16	16	16	16
Administration of justice.....	9	6	5	5	5	9
Community and regional development	3	10	11	10	9	3
General government.....	3	0	0	0	0	0
International affairs.....	4	6	6	8	6	0
Income security.....	0	0	0	0	0	0
(In millions of constant FY 1996 dollars)						
Total.....	13,074	13,856	14,163	14,310	14,105	14,037
Health.....	5,398	5,608	6,011	6,069	6,129	6,185
General science.....	2,671	2,821	2,764	2,718	2,646	2,673
Space research and technology.....	1,609	1,652	1,636	1,691	1,869	1,646
National defense.....	1,117	1,327	1,252	1,408	1,222	1,204
Energy.....	881	981	1,005	976	958	948
Agriculture.....	528	543	576	589	590	576
Natural resources and environment.....	389	434	418	400	233	190
Transportation.....	280	275	290	254	229	397
Education, training, employment, and social services.....	123	128	129	129	151	156
Commerce and housing credit.....	36	44	38	37	40	36
Veterans benefits and services.....	19	18	17	17	17	16
Administration of justice.....	10	7	5	5	6	9
Community and regional development	3	11	12	11	9	3
General government.....	3	0	0	0	0	0
International affairs.....	5	7	7	9	6	0
Income security.....	0	0	0	0	0	0

**NOTES:** Because of rounding, components may not add to totals.

GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.

**Table 26d. Federal budget authority for basic research, by budget function:  
fiscal years 1996-2001**

Budget function	1996	1997	1998	1999	2000 preliminary	2001 proposed
(In millions of dollars)						
Total.....	14,442	14,961	15,523	17,433	18,965	20,259
Health.....	6,395	6,852	7,356	8,634	9,834	10,399
General science <sup>1</sup> .....	2,662	2,753	4,121	4,464	4,648	5,272
Space research and technology .....	1,685	1,653	1,610	1,667	1,737	1,761
National defense.....	1,165	1,090	1,067	1,110	1,205	1,262
Energy <sup>1</sup> .....	1,182	1,288	34	36	37	46
Agriculture.....	547	548	571	602	659	702
Natural resources and environment....	147	153	145	142	155	162
Transportation.....	456	420	411	358	255	202
Education, training, employment, and social services.....	140	142	133	99	106	112
Commerce and housing credit.....	37	34	35	41	41	53
Veterans benefits and services <sup>2</sup> .....	13	14	23	263	268	268
Administration of justice.....	12	13	16	18	21	19
Community and regional development	0	0	0	0	0	0
General government.....	0	0	0	0	0	0
International affairs.....	2	2	1	0	0	0
Income security.....	0	0	0	0	0	0
(In millions of constant FY 1996 dollars)						
Total.....	14,442	14,711	15,071	16,708	17,908	18,755
Health.....	6,395	6,738	7,142	8,275	9,286	9,627
General science <sup>1</sup> .....	2,662	2,707	4,000	4,278	4,389	4,880
Space research and technology .....	1,685	1,625	1,563	1,597	1,641	1,631
National defense.....	1,165	1,072	1,036	1,063	1,138	1,168
Energy <sup>1</sup> .....	1,182	1,266	33	34	35	43
Agriculture.....	547	539	554	577	622	650
Natural resources and environment....	147	150	141	136	146	150
Transportation.....	456	413	399	343	241	187
Education, training, employment, and social services.....	140	140	129	95	100	104
Commerce and housing credit.....	37	33	34	39	38	49
Veterans benefits and services <sup>2</sup> .....	13	14	23	252	253	248
Administration of justice.....	12	13	16	17	20	18
Community and regional development	0	0	0	0	0	0
General government.....	0	0	0	0	0	0
International affairs.....	2	2	1	0	0	0
Income security.....	0	0	0	0	0	0

<sup>1</sup>Beginning in FY 1998, a number of Department of Energy programs were reclassified from energy (270) to general science (251).

<sup>2</sup>The Department of Veterans Affairs (VA) submission to Office of Management, MAX Schedule C included both VA's medical care and research accounts. Also, prior to 1999, many of the VA R&D costs were counted as R&D facilities and therefore were not included in this table. Starting in 1999, the costs were shifted from R&D facilities to conduct of R&D due to a reclassification within R&D.

**NOTES:** Data for 1996-99 are actual budget authority. Data for 2000 are preliminary estimates, and data for 2001 are proposed based on the fiscal year 2001 budget. Because of rounding, components may not add to totals.  
GDP implicit price deflators used to convert current dollars to constant 1996 dollars.

**SOURCES:** Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices.